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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/760,559      | 01/21/2004  | Shinya Kosako        | L7990.03105         | 8652             |

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WASHINGTON, DC 20036

EXAMINER

WILLS, MONIQUE M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1795

| MAIL DATE | DELIVERY MODE |
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01/02/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/760,559

Applicant(s)

KOSAKO ET AL.

Examiner

Monique M. Wills

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 9/26/07
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 10-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9+10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/2/07 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/16/07, 1/12/08, 2/28/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse Group I in the reply filed on September 26, 2007 is acknowledged. The traversal is on the ground(s) that there is no unduly extensive or burdensome search. This is not found persuasive because The inventions are related as process of making and product made. The inventions are distinct because the product claimed can be made by another and materially different process, including forming the electrolyte in situ in the fuel cell.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 10-11 & 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue Pub. 2001-076745.

With respect to claim 10, Inoue teaches a polymer electrolyte membrane electrode assembly for a fuel cell, comprising: a polymer electrolyte membrane; an anode-side electrode applied to a first face of the polymer electrolyte membrane; a cathode-side electrode applied to a second face of the polymer electrolyte membrane that opposes the first face; and a plurality of electronically insulating members disposed between the anode-side and cathode-side electrodes that separates the anode-side and cathode-side electrodes in a region of the electronically insulating members. See the Abstract and par. 23. With respect to claim 11, the anode-side and cathode-side electrodes each comprise a catalyst layer. See par. 23. With respect to claim 14, the thicknesses of the electronically insulating members is 10-20 microns. See par. 22. Therefore, the instant claims are anticipated by Inoue.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 & 12-13, 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue Pub. 2001-076745 in view of Yoshida et al. U.S. Pub. 2003/0091891.

Inoue teaches a polymer electrolyte membrane-electrode assembly for a fuel cell comprising: a first electrode and a second electrode; and a polymer electrolyte membrane interposed between said first and second electrodes, wherein each of said first and second electrodes comprises a catalyst layer in contact with said polymer electrolyte membrane and wherein said polymer electrolyte membrane comprises electronically insulating spacer members that separate the respective gas diffusion layers of the first and second electrodes. See the Abstract and par. 23. The spacer members comprise an electrically insulating material. See Par. 15. The insulating layer comprises an electrically insulating inorganic material and a polymer resin. See Par. 24.

Inoue does not teach a gas diffusion layer; or a gas diffusion layer comprising projections facing the polymer electrolyte film.

However, Yoshida et al. teaches a polymer electrolyte fuel cell comprising gas diffusion layers in order to smoothly bring the gas diffusion layer into

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contact with the catalyst layer, resulting in the reduction of contact resistance.

See Paragraph 116.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ the gas diffusion layer with projections of Yoshida, in the fuel cell of Inoue, in order to reduce contact resistance.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Patrick Ryan, may be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

11/6/07

*Mr. Ruthkosky*  
MARK RUTHKOSKY  
PRIMARY EXAMINER  
FOR PATRICK RYAN  
12-26-07

PATRICK RYAN  
SUPERVISORY PATENT EXAMINER  
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